

GAO

United States General Accounting Office  
Report to Congressional Requesters

April 1992

# FEDERAL RESEARCH

## Assessment of the Financial Audit for SEMATECH's Activities in 1990



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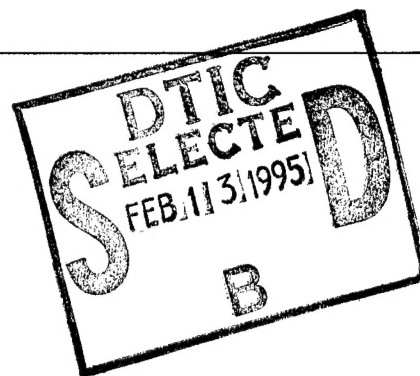
Resources, Community, and  
Economic Development Division

B-236668

April 9, 1992

The Honorable Sam Nunn  
Chairman, Committee on Armed Services  
United States Senate

The Honorable Les Aspin  
Chairman, Committee on Armed Services  
House of Representatives



The National Defense Authorization Act for Fiscal Years 1988 and 1989 (P.L. 100-180) requires that we review the annual audits of the financial statements of SEMATECH, Inc., a consortium of U.S. semiconductor manufacturers and the Department of Defense (DOD), and provide comments to you on their accuracy and completeness. This report, our third in response to the legislative requirement,<sup>1</sup> reviews the audit conducted by Price Waterhouse, an independent public accountant, of SEMATECH's financial statements for the year ending December 31, 1990. During the course of this review, we also followed up on suggestions made in our report on SEMATECH's 1989 financial statements and identified an issue for improving DOD's management of government funds.

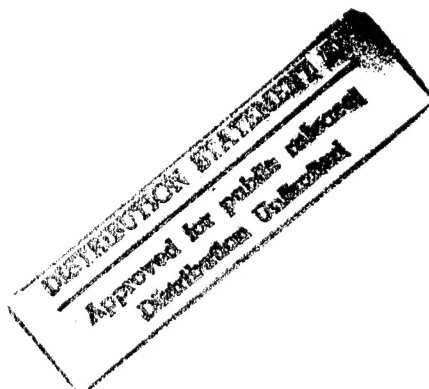
Price Waterhouse's opinion, dated February 11, 1991, stated that SEMATECH's 1990 financial statements are fairly presented in all material respects in conformance with generally accepted accounting principles. Also, in conformance with generally accepted government auditing standards, Price Waterhouse issued reports on SEMATECH's internal control structure and compliance with laws and regulations. These reports disclosed no material internal control weaknesses or noncompliance with laws and regulations. Price Waterhouse issued a management letter that made several recommendations that, although not material to the financial statements, were intended to improve the management efficiency of SEMATECH and enhance its internal control structure.

## Results in Brief

We found no indication during our review that the opinion of Price Waterhouse on SEMATECH's 1990 financial statements and its reports on internal control structure and on compliance with laws and regulations cannot be relied upon.

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<sup>1</sup>See the list of related GAO products at the end of this report.



In its 1990 financial statements, SEMATECH incorporated two suggestions made in our report on its 1989 financial statements, but did not disclose postemployment payments to its former chief operating officer as we had suggested. In addition, our earlier report found that at least two of SEMATECH's member companies had included a portion of their SEMATECH contributions for reimbursement as overhead costs on government contracts they held. Reimbursing such costs through overhead is in accordance with government cost accounting principles and does not directly affect SEMATECH's financial statements. However, doing so serves indirectly to increase the federal government's overall support for SEMATECH's research and development activities. While one company has continued to include a portion of its SEMATECH contributions for reimbursement as overhead costs on government contracts it holds, the other company changed its accounting practices after making its initial contribution so that SEMATECH contributions primarily are expensed against profits from its commercial business.

SEMATECH retains larger on-hand balances of government funds than it needs to meet normal operating expenses, and SEMATECH reimburses interest earned on these cash balances to the U.S. Treasury through DOD's Defense Advanced Research Projects Agency (DARPA). While SEMATECH's internal accounting controls over cash appear adequate, DOD would better meet the requirements of the Office of Management and Budget (OMB) Circular A-110 and ensure that federal funds are efficiently and effectively managed by using a letter of credit for SEMATECH instead of by making funds available in advance through quarterly cash disbursements.

## Background

SEMATECH was incorporated in Delaware in August 1987 as a nonprofit research and development corporation with the objective of advancing semiconductor manufacturing technology. The following companies were 1990 members of SEMATECH:

Advanced Micro Devices, Inc.  
American Telephone and Telegraph Company (AT&T)  
Digital Equipment Corporation  
Harris Corporation  
Hewlett-Packard Company  
Intel Corporation  
International Business Machines Corporation (IBM)  
LSI Logic Corporation  
Micron Technology, Inc.

Motorola, Inc.  
 National Semiconductor Corporation  
 NCR Corporation  
 Rockwell International  
 Texas Instruments, Inc.

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The National Defense Authorization Act for Fiscal Years 1988 and 1989, enacted in December 1987, authorized the Secretary of Defense to make grants to SEMATECH to defray research and development expenses. The act required the Secretary of Defense to enter into a memorandum of understanding that provided, in part, that (1) the total funds made available to SEMATECH by federal, state, and local government agencies for any fiscal year for the support of research and development activities may not exceed 50 percent of the total cost of such activities and (2) an independent, commercial auditor submit annual reports to the Secretary of Defense, SEMATECH, and the Comptroller General on the extent to which SEMATECH's use of funds made available by the United States is consistent with the purposes of the act and SEMATECH's charter and annual operating plan.

In April 1988, the Secretary of Defense delegated responsibility for overseeing SEMATECH to DARPA. In May 1988, DARPA entered into a memorandum of understanding with SEMATECH and signed a grant agreement. In accordance with the grant agreement, DOD advances funds to SEMATECH quarterly after Price Waterhouse certifies that SEMATECH has received an equal amount of matching funds from its member companies. It was anticipated that the federal government would provide financial support for SEMATECH over a 5-year period ending in fiscal year 1992. Since fiscal year 1988, the Congress has made available about \$100 million annually for SEMATECH's use to match the contributions of SEMATECH's member companies.

## Prior Issues

In accordance with suggestions in our report on the 1989 statements, SEMATECH's 1990 financial statements included revised footnotes that corrected immaterial overstatements in depreciation accounts and clarified depreciation policies and practices. However, the 1990 financial statements did not incorporate our suggestion that SEMATECH disclose postemployment payments to its former chief operating officer. In commenting on our earlier report, DOD disagreed that the postemployment agreement should have been disclosed. According to DOD, the payments were immaterial to the financial statements, consistent with industry

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practice, and allowable for matching purposes. As discussed in our earlier report, we believe that SEMATECH's financial statements should have disclosed these payments because this employment benefit was partially paid with federal funds.

Furthermore, during our review of the 1989 financial statements, we found that at least two member companies had included a portion of their SEMATECH contributions for previous years as overhead costs associated with other government contracts they held. Reimbursing such costs through overhead is in accordance with government cost accounting principles and does not directly affect SEMATECH's financial statements. However, we believe it is unclear whether the Congress, in authorizing federal participation in SEMATECH, anticipated that member companies would be partially reimbursed for their SEMATECH contributions. Accordingly, our earlier report suggested, as a matter for congressional consideration, that if federal participation in SEMATECH is continued, the Congress may wish to take such indirect reimbursements into account in determining the appropriate level of federal funding.

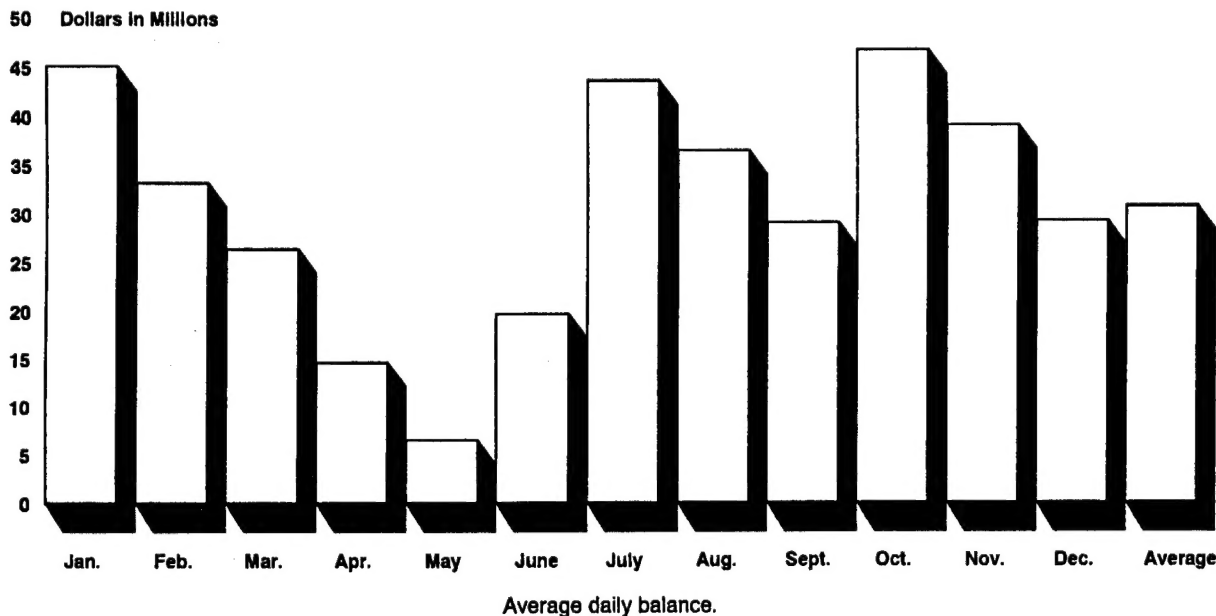
In commenting on our earlier report, DOD noted that no legal basis existed to conclude that such recovery violated the 50-percent limitation on government funding or any other agreement between SEMATECH and DOD. DOD agreed that the Congress should be aware of the magnitude of reimbursements of member companies' contributions to SEMATECH in determining the appropriate level of federal support for particular programs. However, DOD believed that the Congress was aware of the relative magnitude of the cost reimbursements and of companies' difficulties in fully accounting for them.

During our review of SEMATECH's 1990 financial statements, Defense Contract Audit Agency auditors told us that one of the two member companies had revised its accounting practices after its first year's payment to SEMATECH so that contributions primarily are expensed against profits from its commercial business. However, the other member company has continued to include a portion of its prior-year SEMATECH contributions as overhead costs associated with government contracts it holds. We believe that the upcoming debate over whether to continue federal funding for SEMATECH provides an opportunity for the Congress to address this issue.

## Letter of Credit Would Reduce Federal Funds On-Hand at SEMATECH

During 1990, SEMATECH held, on a daily average, about \$30 million in unexpended federal grant funds to meet its projected expenses. (See fig. 1.) In August 1990, for example, SEMATECH's daily balance of government cash ranged from \$33 million to \$41 million, while daily expenditures of government funds averaged only about \$280,000. SEMATECH earned about \$2.5 million of interest in 1990 on the surplus government funds and has reimbursed this interest through DARPA to the U.S. Treasury on a quarterly basis. According to Price Waterhouse auditors, SEMATECH (1) maintained proper internal accounting controls over cash balances, (2) accurately calculated interest due the government on unexpended cash balances, and (3) reimbursed such interest quarterly through DARPA to the U.S. Treasury.

Figure 1: Federal Funds On-Hand at SEMATECH During 1990



Source: SEMATECH.

Attachment I of OMB Circular A-110, Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations, establishes requirements for disbursing federal funds to



grantees, such as SEMATECH.<sup>2</sup> The attachment's principal objective is to minimize the time elapsing between disbursements by grantees and the transfer of funds from the U.S. Treasury to the grantees. In particular, the attachment generally requires use of a letter of credit if (1) the agency and grantee will have a continuing relationship for at least 1 year and the agency expects to advance at least \$250,000 to the grantee during the period, (2) the grantee has established or demonstrated the willingness and ability to maintain procedures that will minimize the time elapsing between the transfer of funds and their disbursement by the grantee, and (3) the grantee's financial management system meets specified minimum standards for fund control and accountability. The attachment requires that an advance payment method—the method now used with SEMATECH—be used if the grantee meets the second and third requirements but does not meet the first regarding the length of the relationship or amount of funding.

SEMATECH has reimbursed interest earned on government funds quarterly through DARPA to the U.S. Treasury, as required. However, we believe SEMATECH had an unnecessarily large amount of government funds on-hand during 1990. DARPA would reduce the amount of federal funds on-hand at SEMATECH if it used a letter of credit, which would enable SEMATECH to draw down federal funds a few days before they are needed to pay expenses. This method would better meet the requirements of OMB Circular A-110 and ensure that DARPA's funds are efficiently and effectively managed during the course of a multiyear grant agreement, while enabling SEMATECH to meet its funding needs.

## Conclusions

Our review found no indication that the opinion of Price Waterhouse on SEMATECH's financial statements for 1990 or its reports on internal control structure and on compliance with laws and regulations cannot be relied upon.

Our report on the 1989 financial statements found that at least two of SEMATECH's member companies had included a portion of their SEMATECH contributions for reimbursement as overhead costs on government contracts they held. At least one company has continued to include a portion of its SEMATECH contributions for reimbursement as overhead costs on government contracts it holds. We believe that the upcoming debate

<sup>2</sup>An Advance Understanding Regarding Interpretation and Application of OMB Circular A-110 that DARPA and SEMATECH signed in May 1988 states that, in light of the National Defense Authorization Act's 50-percent limitation on government contributions in any given fiscal year, detailed payment provisions are set forth in the grant agreement that shall be deemed consistent with attachment I.

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over whether to continue federal funding for SEMATECH provides an opportunity for the Congress to consider whether such indirect reimbursements should be taken into account in determining the appropriate level of federal funding.

In addition, if federal funding for SEMATECH is continued beyond fiscal year 1992, DOD would better meet the requirements of OMB Circular A-110 and ensure that federal funds are efficiently and effectively used by disbursing funds through a letter of credit, rather than on a quarterly basis in advance of anticipated expenditures.

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## Recommendation

If DOD continues to fund SEMATECH's activities or participates in other joint industry-government consortia, we recommend that the Secretary of Defense require that funds be disbursed through a letter of credit rather than by making advance payments to the consortium.

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## Agency Comments and Our Evaluation

A draft of this report was sent to the Department of Defense and SEMATECH for comment. In its written comments, DOD concurred with the report's findings and recommendation, stating that it will change disbursing procedures if the SEMATECH grant is continued for at least another year and annual advance payments are anticipated to exceed \$250,000. (See app. I.) DOD intends to use either (1) the Letter of Credit - Federal Reserve Bank; (2) an electronic funds transfer method, such as the Automated Clearing House network; or (3) a similar advanced payment method with more frequent payments (e.g., monthly) to ensure that cash held by SEMATECH is more commensurate with its actual needs and meets the objective of OMB Circular A-110.

SEMATECH in its written comments said that it appreciated the forthright manner in which we examined and presented the issues and that our suggestions have been helpful and have contributed to improving the presentation of its financial statements. (See app. II.) In a separate letter, SEMATECH provided data showing that the average amount of federal grant funds it held was reduced from \$37.4 million in the second half of 1990 to \$24 million in the second half of 1991. SEMATECH also suggested a few changes to improve the presentation and technical accuracy of the draft report, which we incorporated as appropriate.



## Scope and Methodology

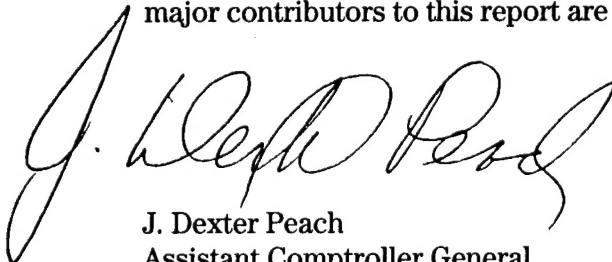
To determine the accuracy and completeness of the Price Waterhouse audit, we

- reviewed the auditors' approach and planning of the audit;
- evaluated the qualifications and independence of the audit staff;
- reviewed the financial statements and auditors' reports evaluating compliance with generally accepted accounting principles and generally accepted government auditing standards; and
- reviewed the auditors' working papers to determine (1) the nature, timing, and extent of audit work performed; (2) the extent of audit quality control methods the auditors used; (3) whether a review was conducted of SEMATECH's internal control structure; (4) whether the auditors tested transactions for compliance with applicable laws and regulations; and (5) whether evidence in the working papers supported the auditors' opinion on the financial statements and internal control structure and compliance reports.

This report does not include a copy of the 1990 financial statements because they contain proprietary information. We conducted our review of the Price Waterhouse audit of SEMATECH's 1990 financial statements from May to November 1991 in accordance with generally accepted government auditing standards.

As agreed with your offices, we are sending copies of this report to the Secretary of Defense, the Chairman of the Board of Directors for SEMATECH, representatives of Price Waterhouse, and other interested parties. Copies will be made available to others upon request.

This report was prepared under the direction of Victor S. Rezendes, Director, Energy Issues, who can be contacted at (202) 275-1441. Other major contributors to this report are listed in appendix III.



J. Dexter Peach  
Assistant Comptroller General



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## Abbreviations

DARPA	Defense Advanced Research Projects Agency
DOD	Department of Defense
GAO	General Accounting Office
OMB	Office of Management and Budget
SEMATECH	SEmiconductor MANufacturing TECHnology



# Comments From the Department of Defense



DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING

WASHINGTON, DC 20301-3010

MAR 13 1992

Ms. Judy England-Joseph  
Director, Housing and Community Development Issues  
Resources, Community, and Economic  
Development Division  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Ms. England-Joseph:

This is the Department of Defense response to the General Accounting Office draft report entitled-- "FEDERAL RESEARCH: Assessment of the Financial Audit for SEMATECH's Activities in 1990," dated January 29, 1992 (GAO Code 385294/OSD Case 8947). The DoD concurs with the report findings, and partially concurs with the recommendation.

The fact that the GAO report found no serious deficiencies is a credit to the sound management and competence of both SEMATECH and its independent certified public accountant, Price Waterhouse. The Price Waterhouse audit found the SEMATECH 1990 financial statements to be presented fairly in all material aspects, and in conformance with generally accepted accounting principles.

The detailed DoD comments on the recommendation are provided in the enclosure. The Department appreciates the opportunity to comment on the draft report.

Sincerely,

  
Victor H. Reis

Enclosure

GAO DRAFT REPORT--DATED JANUARY 29, 1992  
(GAO CODE 385294) OSD CASE 8947

"FEDERAL RESEARCH: ASSESSMENT OF THE FINANCIAL AUDIT  
FOR SEMATECH'S ACTIVITIES IN 1990"

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DEPARTMENT OF DEFENSE COMMENTS ON THE GAO RECOMMENDATION

\* \* \* \* \*

- o **RECOMMENDATION:** The GAO recommended that the Secretary of Defense require that funds be disbursed to the SEMATECH through a letter of credit, rather than by making advance payments to the consortium. (p. 10/GAO Draft Report)

**DOD RESPONSE:** Concur. It is DoD policy that cash held outside of the U.S. Treasury be minimized, commensurate with actual needs. The current grant was already modified on January 3, 1992, to provide additional funds for FY 1992. It is, therefore, unnecessary to modify the current arrangements with SEMATECH, given the guidelines for change contained in Office of Management and Budget Circular A-110. However, should the grant be continued for at least another year, the DoD will change the associated disbursing procedures--if the annual advance payments are anticipated to be in excess of \$250,000.

Since the U.S. Treasury Financial Communications System - Letter of Credit system is being phased out, the DoD intends to use (1) the Letter of Credit - Federal Reserve Bank, or (2) an electronic funds transfer method, such as the Automated Clearing House network, or (3) a similar advanced payment method with more frequent payments (for example, monthly)--to ensure cash held by SEMATECH is more commensurate with its actual needs and meets the requirements of Office of Management and Budget Circular A-110.

Enclosure



# Comments From SEMATECH

**SEMATECH**

March 2, 1992

2706 MONTOPOLIS DRIVE  
AUSTIN, TEXAS 78741-6499  
(512) 356-3500

Ms. Judy England-Joseph  
Director of Housing and Community Development Issues  
United States General Accounting Office  
Room 1842  
441 G Street NW  
Washington, DC 20548

Dear Ms. England-Joseph:

We value the opportunity to comment on the draft GAO report which reviews the accuracy and comprehensiveness of the audit of SEMATECH's 1990 financial statements performed by Price Waterhouse.

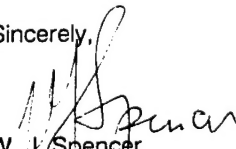
The GAO officials did their usual thorough job in the assessment of the way SEMATECH conducts its financial affairs and found no question in the financial integrity of any SEMATECH program. I am delighted that once again, after intense scrutiny, SEMATECH and its programs passed the GAO review with flying colors.

As the GAO report stated, SEMATECH's accounting practices and operations are completely within the guidelines expected of the consortium. It should be made clear that the report's reference to a policy issue pertaining to member company accounting procedures is the same issue raised in previous reports. The comment does not relate to SEMATECH's financial statement, nor is there any reason to suggest that SEMATECH should be required to account for the origin of funds provided by its members.

There are a few peripheral issues from the report that we would like to discuss. I have asked the chief financial officer for SEMATECH to address some of the specific points. His letter is attached.

We appreciate the courtesy and cooperation of the GAO officials in conducting their review during the past year, as well as the open and forthright manner in which they have presented and examined the issues with us. Their suggestions have been helpful and have contributed to improving the presentation of SEMATECH's financial statements. We look forward to continuing to work with you in the future.

Sincerely,



W. J. Spencer  
President and Chief Executive Officer

# Major Contributors to This Report

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Resources,  
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Cary Russell, Evaluator

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# Related GAO Products

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Federal Research: SEMATECH's Efforts to Develop and Transfer Manufacturing Technology (GAO/RCED-91-139FS, May 10, 1991).

Federal Research: Assessment of the Financial Audit for SEMATECH's Activities in 1989 (GAO/RCED-91-74, Apr. 30, 1991).

Federal Research: SEMATECH's Efforts to Strengthen the U.S. Semiconductor Industry (GAO/RCED-90-236, Sept. 13, 1990).

Federal Research: Assessment of the Financial Audit for SEMATECH's Activities in 1988 (GAO/RCED-90-35, Feb. 16, 1990).

Federal Research: The SEMATECH Consortium's Start-up Activities (GAO/RCED-90-37, Nov. 3, 1989).